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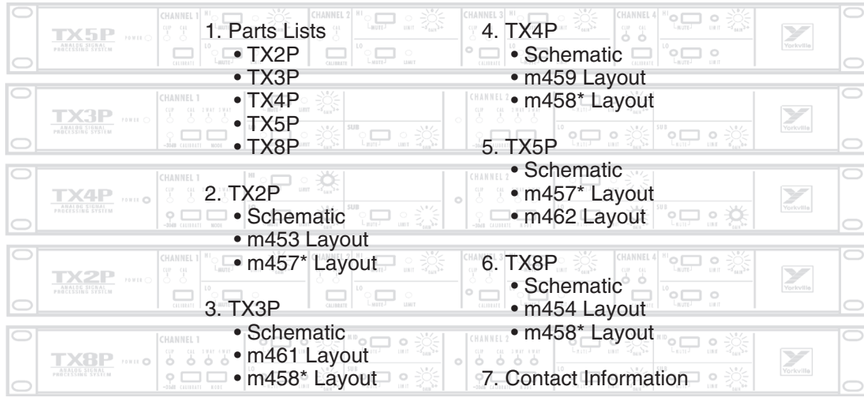
Quality and Innovation Since 1963

Printed in Canada

TX-SERIES

PROFESSIONAL LOUDSPEAKER SYSTEMS

SERVICE MANUAL



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IMPORTANT SAFETY INSTRUCTIONS

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

CAUTION:

DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Read Instructions:

The ***Owner's Manual*** should be read and understood before operation of your unit. Please, save these instructions for future reference.

Packaging:

Keep the box and packaging materials, in case the unit needs to be returned for service.

Warning:

When using electric products, basic precautions should always be followed, including the following:

Power Sources:

Your unit should be connected to a power source only of the voltage specified in the owners manual or as marked on the unit. This unit has a polarized plug. Do not use with an extension cord or receptacle unless all three blades can be fully inserted to prevent blade exposure. Precautions should be taken so that the grounding scheme on the unit is not defeated.

Power Cord:

The AC supply cord should be routed so that it is unlikely that it will be damaged. If the AC supply cord is damaged **DO NOT OPERATE THE UNIT**.

Service:

The unit should be serviced only by qualified service personnel.

INSTRUCTIONS RELATIVES AU RISQUE DE FEU, CHOC ÉLECTRIQUE, OU BLESSURES AUX PERSONNES.

AFIN DE RÉDUIRE LES RISQUE DE CHOC ÉLECTRIQUE, N'ENLEVEZ PAS LE COUVERT (OU NE CONTIENT AUCUNE PIÈCE RÉPARABLE PAR L'UTILISATEUR.

CONSULTEZ UN TECHNICIEN QUALIFIÉ POUR L'ENTRETIENT.

Veuillez lire le manuel:

Il contient des informations qui devraient êtres comprises avant l'opération de votre appareil. Conservez S.V.P. ces instructions pour consultations ultérieures

Emballage:

Conservez la boite au cas ou l'appareil devait être retourner pour réparation.

Warning:

Attention: Lors de l'utilisation de produits électrique, assurez-vous d'adhérer à des précautions de bases incluant celle qui suivent:

Alimentation:

L'appareil ne doit être branché qu'à une source d'alimentation correspondant au voltage spécifié dans le manuel ou tel qu'indiqué sur l'appareil. Cet appareil est équipé d'une prise d'alimentation polarisée. Ne pas utiliser cet appareil avec un cordon de raccordement à moins qu'il soit possible d'insérer complètement les trois lames. Des précautions doivent êtres prises afin d'eviter que le système de mise à la terre de l'appareil ne soit désengagé.

Cordon d'alimentation:

Évitez d'endommager le cordon d'alimentation. **N'UTILISEZ PAS L'APPAREIL** si le cordon d'alimentation est endommagé.

Service:

Consultez un technicien qualifié pour l'entretien de votre appareil.

TX2P Parts List 11/5/98

YS No.	Description	Qty.
3571	28 PIN X .6" I.C. SOCKET	1
6997	4MHZ CRYSTAL HC495	1
6405	RED 3MM LED 1V7 5MA BRIGHT PACE	16
6407	YELLOW3MM LED 1V8 5MA EVRLITE204YD	8
6408	GREEN 3MM LED 1V9 5MA FROSTED	1
6438	1N4004 400V 1A0 DIODE T&R	6
6825	1N4148 75V 0A45 DIODE T&R	33
6733	BAT85/11330V 0A2 DIODE SCHTKY T&R	32
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	8
6732	MC79L05ACP TO92 NEG 5V0 REG	1
6855	NJM7805FA TO220 POS 5V0 REG IS	1
6856	NJM7815FA TO220 POS 15V0 REG IS	1
6857	NJM7915FA TO220 NEG 15V0 REG IS	1
5103	MPSA06 TO92 NPN TRANS. T&R	9
5104	MPSA56 TO92 PNP TRANS. T&R	1
5105	MPSA13 TO92 NPN DARLINGTONT&R	8
5106	MPSA63 TO92 PNP DARLINGTONT&R	4
6798	MC4741CP IC QUAD OP AMP	4
6840	MC33078P IC DUAL OP AMP	8
6882	TL072CP IC FET DUAL OP AMP	7
6889	TLO74CN IC QUAD O/A TEXASI ONLY	12
6950	TLE2062CP IC LOW CUR DUAL OP AMP	16
6745	LM13600N IC XCONDUCTANCE AMP	1
6999	THAT 2180LB IC VCA SIP	8
6959	4052 IC DUAL 1\4 CMOS SWITC	1
6980	MC74HC595AN IC 8 BIT SHIFT REGISTER	5
6995	74HC597N IC 8BIT SHRE6 PARE IN	3
7001	74HC4051N IC 8TO1 CMOS SWITCH	2
6641	DS1233D-10 IC RESET SENSE	1
6970	AT24C02 IC EEPROM 128 BYTES	1
6996	68HC705P9CP IC MICROCOMPUTER	1
7000	DS1868-10 IC (DIGITAL POTENTIOMETER	4
5404	_27P 100V 10%CAP T&R TUBULAR NPO	8
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	10
5203	_47P 100V 2%CAP T&R RAD CER.2"NPO	4
5410	100P 100V 10%CAP T&R BEAD NPO	1
5197	220P 100V 2%CAP T&R RAD CER.2"NPO	4
5201	470P 100V 5%CAP T&R RAD CER.2"NPO	24
5420	680P 50V 10%CAP T&R BEAD NPO	4
5275	__3N3 100V 5%CAP T&R RADIAL.2"FILM	4
6451	__4N7 250V 20%CAP AC Y ONLY RAD10MM	1
5272	__6N8 100V 5%CAP T&R RADIAL.2"FILM	4
5376	__6N8 50V 5%CAP T&R BEAD X7R	4
5205	_15N 100V 10%CAP T&R RADIAL.2"FILM	8
6435	_22N 275V 20%CAP AC X2 RAD BLK15MM	1
5222	_33N 100V 10%CAP T&R RADIAL.2"FILM	20
5306	_33N 50V 10%CAP T&R BEAD X7R	8
5223	_39N 100V 10%CAP T&R RADIAL.2"FILM	8
5224	_47N 100V 10%CAP T&R RADIAL.2"FILM	8
5228	100N 100V 5%CAP T&R RADIAL.2"FILM	61
5314	100N 50V 10%CAP T&R BEAD X7R	10
5230	180N 63V 5%CAP T&R RADIAL.2"FILM	16
5255	__1U 63V 20%CAP T&R RADIAL ELE.2"	5
5257	__2U2 63V 20%CAP T&R RADIAL ELE.2"	4
5259	__4U7 63V 20%CAP T&R RADIAL ELE.2"	4
5281	_10U 16V 20%CAP NONPOLAR T&R .2"	16
5945	_10U 63V 20%CAP T&R RADIAL ELECTR	8
5260	_22U 50V 20%CAP T&R RADIAL ELE.2"	4
5267	100U 25V 20%CAP T&R RADIAL ELE.2"	3
5879	100U 16V 20%CAP T&R RAD EL.2"8X7M	8
5848	1000U 25V 20%CAP AXIAL ELECTR BULK	2
5868	4700U 16V 10%CAP RADIAL ELECT BULK	1
4520	10K TRIM POT (ENCLOSED)	4
4388	100K ROT B KNUR 9MM 25MM DETENT VER	4
3682	250 MALE PCB TAB BULK ON CATRIGE	2
6956	SPEAKON CONN PCB MNT HOR NL4MD-H	4
3923	NC3MAH MALE XLR PC MT	8
3657	FEMALE XLR PC MOUNT HORIZONTAL	4
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2480	0.600 AMP SLO-BLO .25X1.25 FUSE	1
3501	B52200F006 COMP WASH #4 SMALL	3
8659	TX SERIES PUSH SW CAP GREY	12
3473	8? 3/18 SVT AC LINE CORD REMOVABLE	1
3654	PCB CONN 4 CIR .100 LOCKING	3
3676	8 CIR CABLE HOLDER .098	1
5989	4 CIR CABLE HOLDER .098	3
8800	6-32 KEPS NUT ZINC	1
8787	8-32 KEPS NUT ZINC	2
8788	1/4-20 KEPS NUT ZINC	1

YS No.	Description	Qty.
3583	8 CIR WAFER W/LCK 0.1"	1
4811	1/4W 68R 5% T&R RES	16
4602	1/8W 100R 5% T&R RES	17
4645	1/8W 220R0 1%FLAME PROOF T&R RES	6
4977	1/4W 220R 5%MINI T&R RES	4
4867	1/4W 270R 5% T&R RES	4
4986	1/4W 270R 5%MINI T&R RES	24
4855	1/4W 330R 5% T&R RES	2
4821	1/4W 470R 5% T&R RES	20
4933	1/4W 470R 5% .2"U T&R RES	8
4980	1/4W 470R 5%MINI T&R RES	24
4871	1/4W 560R 5% T&R RES	4
4873	1/4W 680R 5% T&R RES	1
4822	1/4W 820R 5% T&R RES	11
5016	1/8W 820R 5%FLAME PROOF T&R RES	5
4823	1/4W 1K 5% T&R RES	4
4981	1/4W 1K 5%MINI T&R RES	17
6110	1/4W 1K0 1%MINI MF T&R RES	8
4854	1/4W 1K2 5% T&R RES	4
4889	1/4W 1K3 5% T&R RES	8
4993	1/4W 1K87 1% T&R RES	8
6113	1/4W 2K 5%MINI T&R RES	1
4919	1/4W 2K05 1%-NO SUBS- T&R RES	4
4864	1/4W 2K7 5% T&R RES	4
6124	1/4W 3K 5%MINI T&R RES	2
4992	1/4W 3K16 1% T&R RES	8
6136	1/4W 3K3 5%MINI T&R RES	8
4774	1/4W 4K12 1% T&R RES	4
4827	1/4W 4K7 5% T&R RES	7
4943	1/4W 4K7 5% .2"U T&R RES	8
4982	1/4W 4K7 5%MINI T&R RES	10
4639	1/4W 4K99 1% T&R RES	16
6128	1/4W 4K99 1%MINI MF T&R RES	16
4893	1/4W 5K1 5% T&R RES	4
6138	1/4W 5K1 5%MINI T&R RES	8
4787	1/4W 7K960 0.1% *** T&R RES	8
4792	1/4W 8K25 1% T&R RES	8
4810	1/4W 9K1 5% T&R RES	4
4800	1/4W 10K0 1% T&R RES	12
4829	1/4W 10K 5% T&R RES	10
4983	1/4W 10K 5%MINI T&R RES	18
6116	1/4W 10K0 1%MINI MF T&R RES	32
4856	1/4W 12K 5% T&R RES	4
4953	1/4W 12K 5% .2"U T&R RES	3
4979	1/4W 15K 5%MINI T&R RES	4
6123	1/4W 20K0 1%MINI MF T&R RES	23
6118	1/4W 22K 5%MINI T&R RES	4
4902	1/4W 24K 5% T&R RES	4
6129	1/4W 27K 5%MINI T&R RES	3
4917	1/4W 31K6 1% T&R RES	4
6122	1/4W 33K 5%MINI T&R RES	4
4767	1/4W 36K0 1%FLAME PROOF T&R RES	4
4853	1/4W 39K 5% T&R RES	1
6119	1/4W 47K 5%MINI T&R RES	20
4761	1/4W 60K4 1% T&R RES	8
6139	1/4W 62K 5%MINI T&R RES	4
4586	1/4W 82K 5%MINI T&R RES	4
4772	1/4W 82K5 1% T&R RES	16
6120	1/4W 100K 5%MINI T&R RES	12
4851	1/4W 120K 5% T&R RES	4
4839	1/4W 150K 5% T&R RES	4
4972	1/4W 270K 5% .2"U T&R RES	4
4796	1/4W 180K 5%MINI T&R RES	5
4849	1/4W 180K 5% T&R RES	3
6137	1/4W 200K 5%MINI T&R RES	1
4844	1/4W 1M 5% T&R RES	24
4948	1/4W 1M 5% .2"U T&R RES	12
4951	1/4W 4M7 5% .2"U T&R RES	1
3690	_8" 4C-28AWG RIB 1 W/LCK HDR 0.1"	3
3706	13" 8C-26AWG RIB 1 W/LCK HDR 0.1"	1
8774	1/4-20 X 1 1/2 GRD 5 BUTTON HEX JS5	1
3629	SNAP IEC PWR SOC W/.250TAB FOR .04	1
3739	CUSTOM .4 LED SPACER	25
3859	1/2 PLASTIC HEX SPACER #4	5
8818	3/4 OD X 5/16 ID X .08 THICK WASHER	1
8491	#10 SPLIT LOCK WASHER BO	11
3439	SP SERIES VERTICAL MOM PCB SWITCH	12
1317	TXP SERIES PC MOUNT XFMR	1

TX3P Parts List 11/5/98

YS No.	Description	Qty.
3571	28 PIN X .6" I.C. SOCKET	1
6997	4MHZ CRYSTAL HC495	1
6405	RED 3MM LED 1V7 5MA BRIGHT PACE	10
6407	YELLOW3MM LED 1V8 5MA EVRLITE204YD	12
6408	GREEN 3MM LED 1V9 5MA FROSTED	3
6438	1N4004 400V 1A0 DIODE T&R	6
6825	1N4148 75V 0A45 DIODE T&R	39
6733	BAT85/11330V 0A2 DIODE SCHTKY T&R	25
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	6
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	2
6732	MC79L05ACP TO92 NEG 5V0 REG	1
6855	NJM7805FA TO220 POS 5V0 REG IS	1
6856	NJM7815FA TO220 POS 15V0 REG IS	1
6857	NJM7915FA TO220 NEG 15V0 REG IS	1
5103	MPSA06 TO92 NPN TRANS. T&R	7
5104	MPSA56 TO92 PNP TRANS. T&R	1
5105	MPSA13 TO92 NPN DARLINGTONT&R	6
5106	MPSA63 TO92 PNP DARLINGTONT&R	2
6798	MC4741CP IC QUAD OP AMP	5
6840	MC33078P IC DUAL OP AMP	8
6882	TL072CP IC FET DUAL OP AMP	5
6889	TLO74CN IC QUAD O/A TEXASI ONLY	7
6950	TLE2062CP IC LOW CUR DUAL OP AMP	20
6745	LM13600N IC XCONDUCTANCE AMP	1
6999	THAT 2180LB IC VCA SIP	6
6959	4052 IC DUAL 1\4 CMOS SWITC	3
6980	MC74HC595AN IC 8 BIT SHIFT REGISTER	5
6995	74HC597N IC 8BIT SHRE6 PARE IN	3
7001	74HC4051N IC 8TO1 CMOS SWITCH	3
6641	DS1233D-10 IC RESET SENSE	1
6970	AT24C02 IC EEPROM 128 BYTES	1
6996	68HC705P9CP IC MICROCOMPUTER	1
7000	DS1868-10 IC (DIGITAL POTENTIOMETER	4
5404	_27P 100V 10%CAP T&R TUBULAR NPO	6
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	8
5410	100P 100V 10%CAP T&R BEAD NPO	1
5197	220P 100V 2%CAP T&R RAD CER.2"NPO	6
5417	330P 50V 10%CAP T&R BEAD NPO	2
5201	470P 100V 5%CAP T&R RAD CER.2"NPO	16
5208	__2N2 400V 5%CAP T&R RADIAL.2"FILM	2
5432	__4N7 50V 10%CAP T&R TUBULAR Y5R	2
6451	__4N7 250V 20%CAP AC Y ONLY RAD10MM	1
5376	__6N8 50V 5%CAP T&R BEAD X7R	2
5204	_10N 100V 10%CAP T&R RADIAL.2"FILM	4
5205	_15N 100V 10%CAP T&R RADIAL.2"FILM	8
6435	_22N 275V 20%CAP AC X2 RAD BLK15MM	1
5222	_33N 100V 10%CAP T&R RADIAL.2"FILM	5
5306	_33N 50V 10%CAP T&R BEAD X7R	3
5223	_39N 100V 10%CAP T&R RADIAL.2"FILM	4
5228	100N 100V 5%CAP T&R RADIAL.2"FILM	55
5314	100N 50V 10%CAP T&R BEAD X7R	10
5229	150N 63V 10%CAP T&R RADIAL.2"FILM	12
5230	180N 63V 5%CAP T&R RADIAL.2"FILM	4
5231	220N 63V 10%CAP T&R RADIAL.2"FILM	6
5233	330N 63V 5%CAP T&R RADIAL.2"FILM	4
5234	470N 63V 10%CAP T&R RADIAL.2"FILM	2
5240	680N 63V 10%CAP T&R RADIAL.2"FILM	4
5255	__1U 63V 20%CAP T&R RADIAL ELE.2"	7
5257	__2U2 63V 20%CAP T&R RADIAL ELE.2"	4
5259	__4U7 63V 20%CAP T&R RADIAL ELE.2"	2
5281	_10U 16V 20%CAP NONPOLAR T&R .2"	6
5945	_10U 63V 20%CAP T&R RADIAL ELECTR	8
5260	_22U 50V 20%CAP T&R RADIAL ELE.2"	2
5267	100U 25V 20%CAP T&R RADIAL ELE.2"	9
5848	1000U 25V 20%CAP AXIAL ELECTR BULK	2
5868	4700U 16V 10%CAP RADIAL ELECT BULK	1
4388	100K ROT B KNUR 9MM 25MM DETENT VER	6
6956	SPEAKON CONN PCB MNT HOR NL4MD-H	3
3922	NC3FAH1-0 FEMALE XLR PC MT	2
3923	NC3MAH MALE XLR PC MT	6
3451	0.089 OD SMALL EYELET ELECTROPLATED	12
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2480	0.600 AMP SLO-BLO .25X1.25 FUSE	1
3501	B52200F006 COMP WASH #4 SMALL	3
8659	TX SERIES PUSH SW CAP GREY	10
3654	PCB CONN 4 CIR .100 LOCKING	3
3676	8 CIR CABLE HOLDER .098	1
5989	4 CIR CABLE HOLDER .098	3
8800	6-32 KEPS NUT ZINC	1

YS No.	Description	Qty.
8787	8-32 KEPS NUT ZINC	2
8788	1/4-20 KEPS NUT ZINC	1
3583	8 CIR WAFER W/LCK 0.1"	1
4811	1/4W 68R 5% T&R RES	12
4602	1/8W 100R 5% T&R RES	13
4645	1/8W 220R0 1%FLAME PROOF T&R RES	7
4986	1/4W 270R 5%MINI T&R RES	25
4855	1/4W 330R 5% T&R RES	2
4933	1/4W 470R 5% .2"U T&R RES	6
4980	1/4W 470R 5%MINI T&R RES	48
4873	1/4W 680R 5% T&R RES	1
4981	1/4W 1K 5%MINI T&R RES	23
6110	1/4W 1K0 1%MINI MF T&R RES	8
4988	1/4W 1K5 5%MINI T&R RES	4
4993	1/4W 1K87 1% T&R RES	8
4825	1/4W 1K8 5% T&R RES	2
6113	1/4W 2K 5%MINI T&R RES	3
4919	1/4W 2K05 1%-NO SUBS- T&R RES	2
4587	1/4W 2K32 1% T&R RES	2
6114	1/4W 2K49 1%MINI MF T&R RES	2
4588	1/4W 2K43 1% T&R RES	2
4864	1/4W 2K7 5% T&R RES	2
4805	1/4W 2K87 1% T&R RES	4
6124	1/4W 3K 5%MINI T&R RES	6
4992	1/4W 3K16 1% T&R RES	6
4826	1/4W 3K3 5% T&R RES	2
4850	1/4W 3K9 5% T&R RES	2
4943	1/4W 4K7 5% .2"U T&R RES	6
4982	1/4W 4K7 5%MINI T&R RES	7
4639	1/4W 4K99 1% T&R RES	15
6128	1/4W 4K99 1%MINI MF T&R RES	3
6138	1/4W 5K1 5%MINI T&R RES	6
4717	1/4W 6K19 1%MINI T&R RES	2
4978	1/4W 6K8 5%MINI T&R RES	6
4801	1/4W 6K98 1% T&R RES	2
4887	1/4W 7K5 5% T&R RES	4
4787	1/4W 7K960 0.1% *** T&R RES	8
4792	1/4W 8K25 1% T&R RES	2
4983	1/4W 10K 5%MINI T&R RES	12
6116	1/4W 10K0 1%MINI MF T&R RES	42
4860	1/4W 11K 5% T&R RES	2
4953	1/4W 12K 5% .2"U T&R RES	3
4773	1/4W 12K1 1% T&R RES	2
4979	1/4W 15K 5%MINI T&R RES	2
4784	1/4W 17K40 0.1% *** T&R RES	4
6123	1/4W 20K0 1%MINI MF T&R RES	21
6118	1/4W 22K 5%MINI T&R RES	6
4902	1/4W 24K 5% T&R RES	6
6129	1/4W 27K 5%MINI T&R RES	3
4890	1/4W 30K 5% T&R RES	2
6122	1/4W 33K 5%MINI T&R RES	4
4767	1/4W 36K0 1%FLAME PROOF T&R RES	4
4853	1/4W 39K 5% T&R RES	1
4927	1/4W 47K 5% .2"U T&R RES	2
6119	1/4W 47K 5%MINI T&R RES	24
6139	1/4W 62K 5%MINI T&R RES	2
4760	1/4W 75K 5% T&R RES	4
4772	1/4W 82K5 1% T&R RES	16
6120	1/4W 100K 5%MINI T&R RES	12
4851	1/4W 120K 5% T&R RES	2
4894	1/4W 130K 5% T&R RES	2
4839	1/4W 150K 5% T&R RES	2
4796	1/4W 180K 5%MINI T&R RES	6
6137	1/4W 200K 5%MINI T&R RES	5
6126	1/4W 220K 5%MINI T&R RES	6
6135	1/4W 270K 5%MINI T&R RES	6
4844	1/4W 1M 5% T&R RES	20
4948	1/4W 1M 5% .2"U T&R RES	14
4797	1/4W 1M2 5% T&R RES	4
4951	1/4W 4M7 5% .2"U T&R RES	1
3690	_8" 4C-28AWG RIB 1 W/LCK HDR 0.1"	3
3706	13" 8C-26AWG RIB 1 W/LCK HDR 0.1"	1
3629	SNAP IEC PWR SOC W/.250TAB FOR .04	1
3739	CUSTOM .4 LED SPACER	27
3859	1/2 PLASTIC HEX SPACER #4	5
8491	#10 SPLIT LOCK WASHER BO	6
3437	DPDT PUSH SW PCMT V MINI UGT 3522	2
3439	SP SERIES VERTICAL MOM PCB SWITCH	10
1320	TXP SERIES T?RD	1

TX4P Parts List 11/5/98

YS No.	Description	Qty.
3571	28 PIN X .6" I.C. SOCKET	1
6997	4MHZ CRYSTAL HC495	1
6405	RED 3MM LED 1V7 5MA BRIGHT PACE	12
6407	YELLOW3MM LED 1V8 5MA EVRLITE204YD	10
6408	GREEN 3MM LED 1V9 5MA FROSTED	3
6438	1N4004 400V 1A0 DIODE T&R	6
6825	1N4148 75V 0A45 DIODE T&R	41
6733	BAT85/11330V 0A2 DIODE SCHTKY T&R	25
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	6
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	2
6732	MC79L05ACP TO92 NEG 5V0 REG	1
6855	NJM7805FA TO220 POS 5V0 REG IS	1
6856	NJM7815FA TO220 POS 15V0 REG IS	1
6857	NJM7915FA TO220 NEG 15V0 REG IS	1
5103	MPSA06 TO92 NPN TRANS. T&R	7
5104	MPSA56 TO92 PNP TRANS. T&R	3
5105	MPSA13 TO92 NPN DARLINGTONT&R	6
5106	MPSA63 TO92 PNP DARLINGTONT&R	2
6798	MC4741CP IC QUAD OP AMP	5
6840	MC33078P IC DUAL OP AMP	8
6882	TL072CP IC FET DUAL OP AMP	5
6889	TLO74CN IC QUAD O/A TEXASI ONLY	7
6950	TLE2062CP IC LOW CUR DUAL OP AMP	20
6745	LM13600N IC XCONDUCTANCE AMP	1
6999	THAT 2180LB IC VCA SIP	6
6959	4052 IC DUAL 1\4 CMOS SWITC	3
6980	MC74HC595AN IC 8 BIT SHIFT REGISTER	5
6995	74HC597N IC 8BIT SHRE6 PARE IN	3
7001	74HC4051N IC 8TO1 CMOS SWITCH	3
6641	DS1233D-10 IC RESET SENSE	1
6970	AT24C02 IC EEPROM 128 BYTES	1
6996	68HC705P9CP IC MICROCOMPUTER	1
7000	DS1868-10 IC (DIGITAL POTENTIOMETER	4
5404	_27P 100V 10%CAP T&R TUBULAR NPO	6
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	8
5410	100P 100V 10%CAP T&R BEAD NPO	1
5197	220P 100V 2%CAP T&R RAD CER.2"NPO	6
5417	330P 50V 10%CAP T&R BEAD NPO	2
5201	470P 100V 5%CAP T&R RAD CER.2"NPO	16
5275	__3N3 100V 5%CAP T&R RADIAL.2"FILM	2
6451	__4N7 250V 20%CAP AC Y ONLY RAD10MM	1
5272	__6N8 100V 5%CAP T&R RADIAL.2"FILM	2
5300	_10N 50V 10%CAP T&R BEAD X7R	4
5205	_15N 100V 10%CAP T&R RADIAL.2"FILM	6
6435	_22N 275V 20%CAP AC X2 RAD BLK15MM	1
5222	_33N 100V 10%CAP T&R RADIAL.2"FILM	7
5306	_33N 50V 10%CAP T&R BEAD X7R	3
5224	_47N 100V 10%CAP T&R RADIAL.2"FILM	4
5228	100N 100V 5%CAP T&R RADIAL.2"FILM	63
5314	100N 50V 10%CAP T&R BEAD X7R	10
5229	150N 63V 10%CAP T&R RADIAL.2"FILM	8
5231	220N 63V 10%CAP T&R RADIAL.2"FILM	2
5234	470N 63V 10%CAP T&R RADIAL.2"FILM	2
5240	680N 63V 10%CAP T&R RADIAL.2"FILM	4
5255	__1U 63V 20%CAP T&R RADIAL ELE.2"	7
5256	__1U 63V 5%CAP T&R RADIAL.2"FILM	2
5257	__2U2 63V 20%CAP T&R RADIAL ELE.2"	4
5259	__4U7 63V 20%CAP T&R RADIAL ELE.2"	2
5281	_10U 16V 20%CAP NONPOLAR T&R .2"	6
5945	_10U 63V 20%CAP T&R RADIAL ELECTR	8
5260	_22U 50V 20%CAP T&R RADIAL ELE.2"	4
5267	100U 25V 20%CAP T&R RADIAL ELE.2"	11
5848	1000U 25V 20%CAP AXIAL ELECTR BULK	2
5868	4700U 16V 10%CAP RADIAL ELECT BULK	1
4388	100K ROT B KNUR 9MM 25MM DETENT VER	6
6956	SPEAKON CONN PCB MNT HOR NL4MD-H	4
3922	NC3FAH1-0 FEMALE XLR PC MT	2
3923	NC3MAH MALE XLR PC MT	8
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2480	0.600 AMP SLO-BLO .25X1.25 FUSE	1
8659	TX SERIES PUSH SW CAP GREY	10
3473	8? 3/18 SVT AC LINE CORD REMOVABLE	1
3654	PCB CONN 4 CIR .100 LOCKING	4
3676	8 CIR CABLE HOLDER .098	1
5989	4 CIR CABLE HOLDER .098	3
8800	6-32 KEPS NUT ZINC	1
8787	8-32 KEPS NUT ZINC	2
8788	1/4-20 KEPS NUT ZINC	1
3583	8 CIR WAFER W/LCK 0.1"	1

YS No.	Description	Qty.
4811	1/4W 68R 5% T&R RES	12
4602	1/8W 100R 5% T&R RES	13
4977	1/4W 220R 5%MINI T&R RES	7
4986	1/4W 270R 5%MINI T&R RES	25
4855	1/4W 330R 5% T&R RES	2
4698	1/8W 475R 1%FLAME PROOF T&R RES	6
4821	1/4W 470R 5% T&R RES	3
4933	1/4W 470R 5% .2"U T&R RES	6
4980	1/4W 470R 5%MINI T&R RES	43
4873	1/4W 680R 5% T&R RES	1
4822	1/4W 820R 5% T&R RES	2
4758	1/4W 953R 1% T&R RES	2
4823	1/4W 1K 5% T&R RES	2
4981	1/4W 1K 5%MINI T&R RES	17
6110	1/4W 1K0 1%MINI MF T&R RES	4
4988	1/4W 1K5 5%MINI T&R RES	2
4993	1/4W 1K87 1% T&R RES	6
6113	1/4W 2K 5%MINI T&R RES	11
4919	1/4W 2K05 1%-NO SUBS- T&R RES	4
4847	1/4W 2K2 5% T&R RES	2
4587	1/4W 2K32 1% T&R RES	2
4883	1/4W 2K49 1% T&R RES	2
4864	1/4W 2K7 5% T&R RES	2
4805	1/4W 2K87 1% T&R RES	2
6124	1/4W 3K 5%MINI T&R RES	2
6136	1/4W 3K3 5%MINI T&R RES	2
4850	1/4W 3K9 5% T&R RES	2
4910	1/4W 4K3 5% T&R RES	2
4943	1/4W 4K7 5% .2"U T&R RES	6
4982	1/4W 4K7 5%MINI T&R RES	7
4639	1/4W 4K99 1% T&R RES	12
6138	1/4W 5K1 5%MINI T&R RES	6
4717	1/4W 6K19 1%MINI T&R RES	8
4978	1/4W 6K8 5%MINI T&R RES	4
4801	1/4W 6K98 1% T&R RES	2
4887	1/4W 7K5 5% T&R RES	6
4787	1/4W 7K960 0.1% *** T&R RES	10
4829	1/4W 10K 5% T&R RES	1
4983	1/4W 10K 5%MINI T&R RES	28
6116	1/4W 10K0 1%MINI MF T&R RES	24
4953	1/4W 12K 5% .2"U T&R RES	5
4775	1/4W 14K0 1% T&R RES	2
4979	1/4W 15K 5%MINI T&R RES	4
4784	1/4W 17K40 0.1% *** T&R RES	2
6123	1/4W 20K0 1%MINI MF T&R RES	21
4777	1/4W 21K5 1% T&R RES	4
6118	1/4W 22K 5%MINI T&R RES	8
4902	1/4W 24K 5% T&R RES	2
4956	1/4W 27K 5% .2"U T&R RES	2
6129	1/4W 27K 5%MINI T&R RES	7
4947	1/4W 33K 5% .2"U T&R RES	4
6122	1/4W 33K 5%MINI T&R RES	6
4767	1/4W 36K0 1%FLAME PROOF T&R RES	4
4794	1/4W 37K90 0.1% *** T&R RES	2
4853	1/4W 39K 5% T&R RES	1
6119	1/4W 47K 5%MINI T&R RES	26
4928	1/4W 56K 5% .2"U T&R RES	2
4761	1/4W 60K4 1% T&R RES	2
6139	1/4W 62K 5%MINI T&R RES	2
4836	1/4W 68K 5% T&R RES	6
4772	1/4W 82K5 1% T&R RES	12
4942	1/4W 100K 5% .2"U T&R RES	4
6120	1/4W 100K 5%MINI T&R RES	12
4851	1/4W 120K 5% T&R RES	2
4796	1/4W 180K 5%MINI T&R RES	6
6137	1/4W 200K 5%MINI T&R RES	5
6126	1/4W 220K 5%MINI T&R RES	4
6135	1/4W 270K 5%MINI T&R RES	6
4842	1/4W 330K 5% T&R RES	2
4880	1/4W 680K 5% T&R RES	2
4844	1/4W 1M 5% T&R RES	20
4948	1/4W 1M 5% .2"U T&R RES	10
4797	1/4W 1M2 5% T&R RES	4
4951	1/4W 4M7 5% .2"U T&R RES	1
3697	RELAY 2C 02AMP DC05 100MA PC-S	2
3690	_8" 4C-28AWG RIB 1 W/LCK HDR 0.1"	3
3706	13" 8C-26AWG RIB 1 W/LCK HDR 0.1"	1
3437	DPDT PUSH SW PCMT V MINI UGT 3522	2
3439	SP SERIES VERTICAL MOM PCB SWITCH	10
1320	TXP SERIES T?RD	1

TX5P Parts List 10/19/00

YS No.	Description	Qty.
3571	28 PIN X .6" I.C. SOCKET	1
6997	4MHZ CRYSTAL HC495	1
5906	RED 3MM LED 1V9 20MA .4SPCER T&R	16
5907	YEL 3MM LED 1V9 20MA .4SPCER T&R	8
5908	GRN 3MM LED 1V9 20MA .4SPCER T&R	1
6825	1N4148 75V 0A45 DIODE T&R	33
6438	1N4004 400V 1A0 DIODE T&R	6
6733	BAT85 30V 0A2 DIODE SCHTKYT&R	32
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	8
6732	MC79L05ACP TO92 N 5V0 REG V4	1
6855	NJM7805FA TO220 P 5V0 REG IS V1	1
6856	NJM7815FA TO220 P 15V0 REG IS V1	1
6857	NJM7915FA TO220 N 15V0 REG IS V2	1
5103	MPSA06 TO92 NPN TRAN T&R TA	9
5104	MPSA56 TO92 PNP TRAN T&R TA	1
5105	MPSA13 TO92 NPN DARL T&R TA	8
5106	MPSA63 TO92 PNP DARL T&R TA	4
6798	MC4741CP IC QUAD OP AMP	4
6840	MC33078P IC DUAL OP AMP	8
6882	TL072CP IC FET DUAL OP AMP	7
6889	TLO74CN IC QUAD O/A T.I ONLY	12
6950	TLE2062CP IC LOW CUR DUAL OP AMP	16
6745	LM13600N IC XCONDUCTANCE AMP	1
6999	THAT 2180LB IC VCA SIP	8
6959	4052 IC DUAL 1\4 CMOS SWITC	1
6980	MC74HC595AN IC 8 BIT SHIFT REGISTE	5
6995	74HC597N IC 8BIT SHRE6 PARE IN	3
7001	74HC4051N IC 8TO1 CMOS SWITCH	2
6641	DS1233D-10 IC RESET SENSE	1
6970	AT24C02 IC EEPROM 128 BYTES	1
6996	68HC705P9CP IC MICROCOMPUTER	1
7000	DS1868-10 IC DIGITAL POT	4
5404	_27P 100V 10%CAP T&R BEAD NPO	8
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	10
5203	_47P 100V 2%CAP T&R RAD CER.2"NPO	4
5410	100P 100V 10%CAP T&R BEAD NPO	1
5197	220P 100V 2%CAP T&R RAD CER.2"NPO	4
5417	330P 50V 10%CAP T&R BEAD NPO	4
5201	470P 100V 5%CAP T&R RAD CER.2"NPO	24
5275	__3N3 100V 5%CAP T&R RAD .2"FLM	4
6451	__4N7 250V 20%CAP BLK 'Y' 10MM AC	1
5272	__6N8 100V 5%CAP T&R RAD .2"FLM	4
5300	_10N 50V 10%CAP T&R BEAD X7R	4
5205	_15N 100V 10%CAP T&R RAD .2"FLM	8
6435	_22N 275V 20%CAP BLK 'X2' 15MM AC	1
5222	_33N 100V 10%CAP T&R RAD .2"FLM	12
5306	_33N 50V 10%CAP T&R BEAD X7R	8
5224	_47N 100V 10%CAP T&R RAD .2"FLM	12
5226	_68N 100V 5%CAP T&R RAD .2"FLM	4
5228	100N 100V 5%CAP T&R RAD .2"FLM	45
5314	100N 50V 10%CAP T&R BEAD X7R	10
5229	150N 63V 10%CAP T&R RAD .2"FLM	8
5234	470N 63V 10%CAP T&R RAD .2"FLM	12
5240	680N 63V 10%CAP T&R RAD .2"FLM	8
5255	__1U 63V 20%CAP T&R RAD .2"EL	1
5257	__2U2 63V 20%CAP T&R RAD .2"EL	4
5281	_10U 16V 20%CAP T&R RAD .2"NP	8
5945	_10U 63V 20%CAP T&R RAD .2"EL	12
5260	_22U 50V 20%CAP T&R RAD .2"EL	8
5267	100U 25V 20%CAP T&R RAD .2"EL	3
5879	100U 16V 20%CAP T&R 8X7MM .2"EL	8
5848	1000U 25V 20%CAP BLK AXIAL EL	2
5868	4700U 16V 10%CAP BLK 16X31MM ELS	1
4388	100K B LIN 9MM DETENT KNURL P30	4
4520	_10K TRIM POT	4
3489	CLIP 250X032 18-22AWG DISCO//INSL	1
3490	CLIP 250X032 14-16AWG DISCO//INSL	4
3602	RING TERMINAL 18AWG WIRE & #8 SCREW	1
3682	250 MALE PCB TAB BULK CARTRIGE	2
6956	SPKON 4C PCB MT HORZ GRY #4	4
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	8
3657	XLR FEML PCB MT HORZ NO SHELL	4
3451	EYELET SMALL 0.089 OD PLATED	16
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2480	0.600 AMP SLO-BLO .25X1.25 FUSE	1
3501	B52200F006 COMP WASH #4 SMALL	3
3799	ROUND BUMPER BUTTON BLACK	1
3810	4" NYLON CABLE TIE	1
3827	SQUARE BUMPER BUTTON BLACK	5
8659	TX SERIES PUSH SW CAP GREY	12
3473	8' 3/18 SVT AC LINE CORD REMOVABLE	1
8250	TX2P OVERLAY	1
3654	PCB CONN 4 CIR .100 LOCKING	3
3676	8 CIR CABLE HOLDER .098	1
5989	4 CIR CABLE HOLDER .098	3
8800	6-32 KEPS NUT ZINC	1

YS No.	Description	Qty.
8787	8-32 KEPS NUT ZINC	2
8788	1/4-20 KEPS NUT ZINC	1
3583	8 CIR WAFER W/LCK 0.1"	1
4597	22AWG STRAN TC WIR JMP	9
4599	22AWG SOLID SC WIR T&R JMP	253
5299	24AWG SOLID SC WIR RAD JMP	24
4811	1/4W 68R 5% T&R RES	16
4602	1/8W 100R 5% T&R RES	17
4645	1/8W 220R0 1%FLAME PROOF T&R RES	2
4977	1/4W 220R 5%MINI T&R RES	4
4986	1/4W 270R 5%MINI T&R RES	32
4855	1/4W 330R 5% T&R RES	2
4821	1/4W 470R 5% T&R RES	16
4933	1/4W 470R 5% .2"U T&R RES	8
4980	1/4W 470R 5%MINI T&R RES	28
4873	1/4W 680R 5% T&R RES	1
4822	1/4W 820R 5% T&R RES	4
4823	1/4W 1K 5% T&R RES	1
4981	1/4W 1K 5%MINI T&R RES	28
6110	1/4W 1K0 1%MINI MF T&R RES	8
4585	1/4W 1K2 5%MINI T&R RES	8
4824	1/4W 1K5 5% T&R RES	4
4993	1/4W 1K87 1% T&R RES	8
4808	1/4W 2K 5% T&R RES	8
6113	1/4W 2K 5%MINI T&R RES	1
4919	1/4W 2K05 1%-NO SUBS- T&R RES	4
4587	1/4W 2K32 1% T&R RES	4
4883	1/4W 2K49 1% T&R RES	4
4864	1/4W 2K7 5% T&R RES	4
4805	1/4W 2K87 1% T&R RES	4
6124	1/4W 3K 5%MINI T&R RES	2
6136	1/4W 3K3 5%MINI T&R RES	8
4943	1/4W 4K7 5% .2"U T&R RES	8
4982	1/4W 4K7 5%MINI T&R RES	9
4639	1/4W 4K99 1% T&R RES	16
6128	1/4W 4K99 1%MINI MF T&R RES	16
6138	1/4W 5K1 5%MINI T&R RES	8
4717	1/4W 6K19 1%MINI T&R RES	4
4870	1/4W 6K2 5% T&R RES	4
4787	1/4W 7K960 0.1% *** T&R RES	8
4800	1/4W 10K0 1% T&R RES	20
4983	1/4W 10K 5%MINI T&R RES	25
6116	1/4W 10K0 1%MINI MF T&R RES	27
4953	1/4W 12K 5% .2"U T&R RES	3
4979	1/4W 15K 5%MINI T&R RES	8
6123	1/4W 20K0 1%MINI MF T&R RES	19
6129	1/4W 27K 5%MINI T&R RES	3
6122	1/4W 33K 5%MINI T&R RES	4
4767	1/4W 36K0 1%FLAME PROOF T&R RES	8
4853	1/4W 39K 5% T&R RES	1
6119	1/4W 47K 5%MINI T&R RES	24
4761	1/4W 60K4 1% T&R RES	4
4760	1/4W 75K 5% T&R RES	4
4763	1/4W 82K50 0.1% *** T&R RES	20
4942	1/4W 100K 5% .2"U T&R RES	4
6120	1/4W 100K 5%MINI T&R RES	12
4851	1/4W 120K 5% T&R RES	4
4796	1/4W 180K 5%MINI T&R RES	4
6137	1/4W 200K 5%MINI T&R RES	1
4879	1/4W 270K 5% T&R RES	4
4880	1/4W 680K 5% T&R RES	4
4844	1/4W 1M 5% T&R RES	24
4948	1/4W 1M 5% .2"U T&R RES	12
4951	1/4W 4M7 5% .2"U T&R RES	1
3690	_8" 4C-28AWG RIB 1 W/LCK HDR 098	3
3706	13" 8C-26AWG RIB 1 W/LCK HDR 098	1
8865	4-40 X 5/16 PAN PH MS JS500	10
8742	4-40 X 3/8 PAN PH TAPTITE JS500	3
8827	4-40 X 1/2 FLAT PH TAPTITE JS500	8
8842	#4 X 5/16 PAN QUAD TYPE A JS500 BLK	16
8801	6-32 X 3/8 PAN PH TAPTITE JS500	1
8829	6-32 X 3/8 FLAT PH TAPTITE BO#4 HEA	34
8802	8-32 X 3/8 PAN QUAD TPTTE JS500	2
8809	10-32 X 1/4 PAN PH TAPTITE JS500	11
8774	1/4-20 X 1 1/2 GRD 5 BUTTON HEX JS5	1
3629	SNAP IEC PWR SOC W/.250TAB FOR .04	1
3859	1/2 PLASTIC HEX SPACER #4	5
8818	3/4 OD X 5/16 ID X .08 THICK WASHER	1
8491	#10 SPLIT LOCK WASHER BO	11
3439	SP SERIES VERTICAL MOM PCB SWITCH	12
1320	TXP SERIES T'RD	1

TX8P Parts List 11/5/98

YS No.	Description	Qty.
3571	28 PIN X .6" I.C. SOCKET	1
6997	4MHZ CRYSTAL HC495	1
6405	RED 3MM LED 1V7 5MA BRIGHT PACE	12
6407	YELLOW3MM LED 1V8 5MA EVRLITE204YD	12
6408	GREEN 3MM LED 1V9 5MA FROSTED	3
6438	1N4004 400V 1A0 DIODE T&R	6
6825	1N4148 75V 0A45 DIODE T&R	45
6733	BAT85/11330V 0A2 DIODE SCHTKY T&R	33
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	8
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	2
6732	MC79L05ACP TO92 NEG 5V0 REG	1
6855	NJM7805FA TO220 POS 5V0 REG IS	1
6856	NJM7815FA TO220 POS 15V0 REG IS	1
6857	NJM7915FA TO220 NEG 15V0 REG IS	1
5103	MPSA06 TO92 NPN TRANS. T&R	9
5104	MPSA56 TO92 PNP TRANS. T&R	1
5105	MPSA13 TO92 NPN DARLINGTONT&R	8
5106	MPSA63 TO92 PNP DARLINGTONT&R	2
6798	MC4741CP IC QUAD OP AMP	6
6840	MC33078P IC DUAL OP AMP	8
6882	TL072CP IC FET DUAL OP AMP	13
6889	TLO74CN IC QUAD O/A TEXASI ONLY	8
6950	TLE2062CP IC LOW CUR DUAL OP AMP	20
6745	LM13600N IC XCONDUCTANCE AMP	1
6999	THAT 2180LB IC VCA SIP	8
6959	4052 IC DUAL 1\4 CMOS SWITC	3
6980	MC74HC595AN IC 8 BIT SHIFT REGISTER	5
6995	74HC597N IC 8BIT SHRE6 PARE IN	3
7001	74HC4051N IC 8TO1 CMOS SWITCH	3
6641	DS1233D-10 IC RESET SENSE	1
6970	AT24C02 IC EEPROM 128 BYTES	1
6996	68HC705P9CP IC MICROCOMPUTER	1
7000	DS1868-10 IC (DIGITAL POTENTIOMETER	4
5404	_27P 100V 10%CAP T&R TUBULAR NPO	8
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	10
5410	100P 100V 10%CAP T&R BEAD NPO	1
5197	220P 100V 2%CAP T&R RAD CER.2"NPO	8
5414	270P 50V 10%CAP T&R BEAD NPO	2
5201	470P 100V 5%CAP T&R RAD CER.2"NPO	20
5424	__1N5 50V 10%CAP T&R TUBULAR Y5P	2
5208	__2N2 400V 5%CAP T&R RADIAL.2"FILM	4
5428	__3N3 50V 10%CAP T&R TUBULAR Y5R	2
6451	__4N7 250V 20%CAP AC Y ONLY RAD10MM	1
5376	__6N8 50V 5%CAP T&R BEAD X7R	2
5205	_15N 100V 10%CAP T&R RADIAL.2"FILM	8
6435	_22N 275V 20%CAP AC X2 RAD BLK15MM	1
5222	_33N 100V 10%CAP T&R RADIAL.2"FILM	7
5306	_33N 50V 10%CAP T&R BEAD X7R	3
5223	_39N 100V 10%CAP T&R RADIAL.2"FILM	4
5227	_82N 100V 5%CAP T&R RADIAL.2"FILM	2
5228	100N 100V 5%CAP T&R RADIAL.2"FILM	77
5314	100N 50V 10%CAP T&R BEAD X7R	12
5229	150N 63V 10%CAP T&R RADIAL.2"FILM	16
5230	180N 63V 5%CAP T&R RADIAL.2"FILM	4
5233	330N 63V 5%CAP T&R RADIAL.2"FILM	4
5240	680N 63V 10%CAP T&R RADIAL.2"FILM	8
5255	__1U 63V 20%CAP T&R RADIAL ELE.2"	9
5257	__2U2 63V 20%CAP T&R RADIAL ELE.2"	4
5259	__4U7 63V 20%CAP T&R RADIAL ELE.2"	4
5281	_10U 16V 20%CAP NONPOLAR T&R .2"	8
5945	_10U 63V 20%CAP T&R RADIAL ELECTR	10
5260	_22U 50V 20%CAP T&R RADIAL ELE.2"	2
5267	100U 25V 20%CAP T&R RADIAL ELE.2"	11
5848	1000U 25V 20%CAP AXIAL ELECTR BULK	2
5868	4700U 16V 10%CAP RADIAL ELECT BULK	1
4388	100K ROT B KNUR 9MM 25MM DETENT VER	8
6956	SPEAKON CONN PCB MNT HOR NL4MD-H	4
3922	NC3FAH1-0 FEMALE XLR PC MT	2
3923	NC3MAH MALE XLR PC MT	8
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2480	0.600 AMP SLO-BLO .25X1.25 FUSE	1
3654	PCB CONN 4 CIR .100 LOCKING	4
3676	8 CIR CABLE HOLDER .098	1
5989	4 CIR CABLE HOLDER .098	3
8800	6-32 KEPS NUT ZINC	1
8787	8-32 KEPS NUT ZINC	2
8788	1/4-20 KEPS NUT ZINC	1
3583	8 CIR WAFER W/LCK 0.1"	1
4811	1/4W 68R 5% T&R RES	16

YS No.	Description	Qty.
4602	1/8W 100R 5% T&R RES	17
4645	1/8W 220R0 1%FLAME PROOF T&R RES	7
4986	1/4W 270R 5%MINI T&R RES	31
4855	1/4W 330R 5% T&R RES	4
4933	1/4W 470R 5% .2"U T&R RES	9
4980	1/4W 470R 5%MINI T&R RES	51
4781	1/8W 681R 1%FLAME PROOF T&R RES	5
4869	1/4W 750R 5% T&R RES	4
4934	1/4W 1K 5% .2"U T&R RES	2
4981	1/4W 1K 5%MINI T&R RES	2
6110	1/4W 1K0 1%MINI MF T&R RES	35
4889	1/4W 1K3 5% T&R RES	4
4769	1/4W 1K4 1% T&R RES	2
4988	1/4W 1K5 5%MINI T&R RES	2
4993	1/4W 1K87 1% T&R RES	8
6113	1/4W 2K 5%MINI T&R RES	1
4919	1/4W 2K05 1%-NO SUBS- T&R RES	2
4847	1/4W 2K2 5% T&R RES	2
4587	1/4W 2K32 1% T&R RES	4
4883	1/4W 2K49 1% T&R RES	2
4805	1/4W 2K87 1% T&R RES	4
6124	1/4W 3K 5%MINI T&R RES	2
4826	1/4W 3K3 5% T&R RES	2
4850	1/4W 3K9 5% T&R RES	2
4756	1/4W 4K120 0.1% *** T&R RES	6
4943	1/4W 4K7 5% .2"U T&R RES	8
4982	1/4W 4K7 5%MINI T&R RES	9
4639	1/4W 4K99 1% T&R RES	16
6128	1/4W 4K99 1%MINI MF T&R RES	12
4893	1/4W 5K1 5% T&R RES	8
4778	1/4W 5K36 1% T&R RES	4
4717	1/4W 6K19 1%MINI T&R RES	4
4978	1/4W 6K8 5%MINI T&R RES	2
4801	1/4W 6K98 1% T&R RES	4
6121	1/4W 6K98 1%MINI MF T&R RES	6
4887	1/4W 7K5 5% T&R RES	4
4787	1/4W 7K960 0.1% *** T&R RES	10
4810	1/4W 9K1 5% T&R RES	2
4940	1/4W 10K 5% .2"U T&R RES	2
4983	1/4W 10K 5%MINI T&R RES	12
6116	1/4W 10K0 1%MINI MF T&R RES	54
4860	1/4W 11K 5% T&R RES	2
4953	1/4W 12K 5% .2"U T&R RES	3
4979	1/4W 15K 5%MINI T&R RES	2
4876	1/4W 16K 5% T&R RES	2
6123	1/4W 20K0 1%MINI MF T&R RES	21
6118	1/4W 22K 5%MINI T&R RES	8
4902	1/4W 24K 5% T&R RES	4
6129	1/4W 27K 5%MINI T&R RES	7
4941	1/4W 30K 5% .2"U T&R RES	2
6122	1/4W 33K 5%MINI T&R RES	4
4767	1/4W 36K0 1%FLAME PROOF T&R RES	6
4794	1/4W 37K90 0.1% *** T&R RES	2
4853	1/4W 39K 5% T&R RES	1
4908	1/4W 45K3 1% T&R RES	2
4927	1/4W 47K 5% .2"U T&R RES	2
6119	1/4W 47K 5%MINI T&R RES	30
4761	1/4W 60K4 1% T&R RES	4
4848	1/4W 62K 5% T&R RES	2
4760	1/4W 75K 5% T&R RES	2
4837	1/4W 82K 5% T&R RES	2
4772	1/4W 82K5 1% T&R RES	16
6120	1/4W 100K 5%MINI T&R RES	12
4851	1/4W 120K 5% T&R RES	2
4839	1/4W 150K 5% T&R RES	4
4796	1/4W 180K 5%MINI T&R RES	6
4886	1/4W 200K 5% T&R RES	5
6126	1/4W 220K 5%MINI T&R RES	6
6135	1/4W 270K 5%MINI T&R RES	4
4842	1/4W 330K 5% T&R RES	2
4844	1/4W 1M 5% T&R RES	24
4948	1/4W 1M 5% .2"U T&R RES	18
4797	1/4W 1M2 5% T&R RES	4
4951	1/4W 4M7 5% .2"U T&R RES	1
3610	10" 9C-26AWG RIBBON CABLE .100"	1
3690	_8" 4C-28AWG RIB 1 W/LCK HDR 0.1"	3
3706	13" 8C-26AWG RIB 1 W/LCK HDR 0.1"	1
3437	DPDT PUSH SW PCMT V MINI UGT 3522	1
3439	SP SERIES VERTICAL MOM PCB SWITCH	12
1320	TXP SERIES T?RD	1

TX2P PROCESSOR

INPUT

HPF

EQ

LIMIT

AGC

HP2

OUTPUT

HI

LO

LPF

VCA

TX2 PROCESSOR TONE GENERATOR

M453.SCH_DATABASE_HISTORY

MODEL(S):- TX2-PROCESSOR

#	DATE	VER#	DESCRIPTION OF CHANGE
1	OCT/07/96		PCB#453 TO MATCH LAYOUT
2	OCT/09/96		PC#5180_R472A_390R->5180K_C286A_3N3 ->2980_R786_1M->220K
3	OCT/16/96	1.40	PC#5213_ADD_100P_FROM_PIN_14_OF_U45 TO GROUND
4	NOV/13/96	1.50	XCH8_TO_1ORDIO
5	NOV/14/96	.	PC#5242_SEE_LIST_BELOW
6	.	.	PC#5243_D29A_TLB62->TL072_USA_4741- >5T187A_R314A_1K->33K1R_R315A_270R-> >820R
7	.	.	
8	.	.	
9	.	.	
10	.	1.60	

M453.SCH_DATABASE_HISTORY

MODEL(S):- TX2-PROCESSOR

#	DATE	VER#	DESCRIPTION OF CHANGE
1	DEC/05/96		U29A_TL072->TLE2062_U17A_TL062-> >5T187A
2	APR/01/97		PC#5308_U4B_MCM2814->AT24C02
3	AUG/03/98	2.00	PC#5349_ADD_DTF_2T4CUIT_TO_Co_(U24A
4	NOV/03/98	2.10	CORRECT_V12A_SYMBOL
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12			

PC#5242 NOV. 14, 96
R523A 40K9 TO 20K0
R524A 45K3 TO 19K8
R525A 45K3 TO 19K8
R526A 20K TO 10K
R464A,R467A,R516A,R516A 10K0 TO 4K99
R465A,R468A,R517A,R517A 20K8 TO 10K0
R470A 390R TO 180R
R245A 390R TO 680R
K521A DELETED

M457

LIMIT SENSE

SWITCHES

LEDS

CAL, SENSE, FREQ. SEL

MUTES

DS1868 DIGITAL POTS

ANLG MUX

MPU

E²

POWER SUPPLY

TX PROCESSOR MICRO PROCESSOR & SUPPLIES

YORKVILLE	DATE:NOV/03/98	MODELS: TX2P	SHEET 1 OF 1
	NAME:M453	PCB#&VER: M453	TITLE: PROCESSOR

SCH ISSUE: 2.20

ASSEMBLY M453-3.20
PCB MECH M453-3.20

BLANK SIZE=17.500"X14.500"

ETCH GUIDE

TX2
PROCESSOR
M453
V3.20

#6996TX2P
USE V1.2 PROCESSOR

PRODUCTION NOTES

1 FOR 120V OPERATION STUFF
J200 AND J202
REMOVE J201

FOR 220VAC OPERATION
REMOVE J200 AND J202
STUFF J201

2 R499A/B/C/D ARE HAND INSERTED
FOR R315A/B/C/D USE PT#5016
820R 1/8WFP
FOR ALL 20K USE 20K0 MINI

M453.PCB_DATABASE_HISTORY

MODEL(S):- TX-2P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	JUL/96	1.00	1ST PRODUCTION
2	NOV/14/96	1.10	PC#5242 SEE LIST BELOW
3	NOV/14/96	.	PC5243 U28A/B,C,D TL062->TL072
4	.	.	U5A,C U8A,C 4741->TL074
5	.	.	R314A/B,C,D 1K-3K16_R315A,B,C,D_ 270R->820R
6	.	.	PC#5261 R472A,B,C,D 100K->180K
7	DEC/05/96	1.20	PC#5272 U28A,B,C,D TLO72->TLE2062
8	.	.	U14/U16A,B,C,D TL052->TLE2062
9	.	.	U17A,B,C,D TL0E2->TL072
10	.	.	PC#5180 SEE LIST BELOW
11	JAN/30/96	.	PC#5711 ADD_DIP_CIRCUIT_TO_LO
12	MAY/14/98	2.00	U24A/B/C/D RT1A/B/C/D
13	.	.	PC#5308 U4U MCM2814P->AT24C02
14	.	.	POWER_XFMR_TO_TOROID
15	JUN/23/98	3.00	PC#5828 R476A,B,C,D 4K220->4K12
16	SEP/09/98	.	PC#6168 UPDATE_XLR #3657
17	SEP/07/00	.	PC#6330 U46 MOTOROLA-74HC597A
18	FEB/12/01	3.10	PHILIPS-74HC597N
19	.	.	D41,D42 3V0->4V7_UPDATE_TABS
20	APR/16/02	3.20	

PC#5242 CHANGES

R532A,B,C,D 49K9 TO 20K0
R476A,B,C,D 45K3 TO 10K0
R499A,B,C,D 45K3 TO 10K0
R522A,B,C,D 20K TO 1K
R466A,B,C,D 10K0 TO 4K99
R467A,B,C,D 10K0 TO 4K99
R515A,B,C,D 10K0 TO 4K99
R516A,B,C,D 10K0 TO 4K99
R459A,B,C,D 20K0 TO 10K0
R462A,B,C,D 20K0 TO 10K0
R509A,B,C,D 20K0 TO 10K0
R511A,B,C,D 20K0 TO 10K0
R472A,B,C,D 390K TO 100K
C293A,B,C,D 470P TO 680P
R521A,B,C,D DELETED

PC#5180 CHANGES

R426A,B,C,D 330K TO 150K
R700A,B,C,D 1M TO 270K
C286A,B,C,D 3N3 TO 6N8

JB1 1-,2+,1+,2- LO_CHAN3/CHAN4 SPEAKON #6956
JB4 1-,2+,1+,2- HI_CHAN3/CHAN4 SPEAKON #6956
JB2 1-,2+,1+,2- LO_CHAN1/CHAN2 SPEAKON #6956
JB3 1-,2+,1+,2- HI_CHAN1/CHAN2 SPEAKON #6956

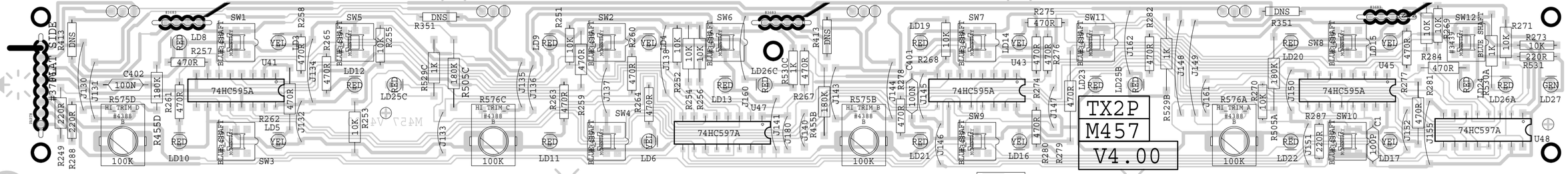
B9 #3923 CHANNEL4_LO
B8 #3923 CHANNEL4_HI
B1 #3657 CHANNEL4_INPUT
B7 #3923 CHANNEL3_LO
B7 #3923 CHANNEL3_HI
B2 #3657 CHANNEL3_INPUT
B6 #3923 CHANNEL2_LO
B6 #3923 CHANNEL2_HI
B3 #3657 CHANNEL2_INPUT
B5 #3923 CHANNEL1_LO
B5 #3923 CHANNEL1_HI
B4 #3657 CHANNEL1_INPUT

WC1 WC2 WC3 BLK F1 CSA=0.6ASB/115V #3414 CB-T250MA/250V
CAUTION!!! HIGH VOLTAGE
FOR 115V WC4 WC5 WC6 AC-WHT
FOR 230V WC7 WC8 ORN
FOR 230V BROWN
WC9 GREY WC10 RED
WC11 YELLOW WHITE
WC13 GREY WC12 RED

VCD

P:\457CMP.PRN

ASSEMBLY M457-4.00
PCB MECH M457-4.00



M457.PCB_DATABASE_HISTORY

MODEL(S):- TX2P/TX5P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/12/96	1.10	PC#5184_PARTS_RENAMED
2	JUL/08/97	2.00	PC#5213_ADD_100P_C1
3	FEB/16/99	3.00	PC#5932_LEDS->AUTO_INS_LED
4	NOV/04/99	.	FIXED_LED_ORIGINS
5	DEC/02/99	3.01	PC#6169_REMOVE_DNS_POTS
6	APR/04/00	3.02	ADD_CLINCH_ORG_MOVE_SHEAR_HOLES
7	FEB/12/01	3.10	PC#6330_U47,U48_MOTOROLA_74HC597A
8	.	.	TO_PHILIPS_74HC597N
9	JUL/02/02	4.00	PC#6180_MOVE_RIBBON_CABLE_PC#6180_
10	.	.	ROTATE_LD3,4,9,15_AND_LD24
11	D	V	N

PRODUCTION NOTES

1 ALL SWITCHES ARE BLUE PT#3439

M461/M458.SCH_DATABASE_HISTORY

MODEL(S):- TX-3P

#	DATE	VER#	DESCRIPTION OF CHANGE
A	96/11/28	1.0pB	FIRST PROTOTYPE
1	.	.	RECEIVED FROM PCB59 TX4
2	.	.	ADDED J18 FOR SELECT SWITCHES
3	.	.	DELETED R2 AND C1 FROM PCB
4	6EB/13/97	1.1B	CHANGED J4TP-MCV-2AP->AT24C02
5	00/03/98	1.2B	CORNET_Q12A_SYMBOL

TX3P PROCESSOR

SUB

INPUT
HPF
NOTCH
LIMIT
ACT
AGC
HI
CLIP
VCA
HP2
OUTPUT
LO
LPF
3-4WAY
3WAY BOOST
EQ

TX PROCESSOR

TONE GENERATOR

POWER SUPPLY

M458

SWITCHES
LIMIT SENSE
CAL. SENSE, FREQ. SEL
MUTES
LEDS

DS1868 DIGITAL POTS

MPU

ANLG MUX

TX PROCESSOR

MICRO PROCESSOR & SUPPLIES

YORKVILLE	DATE: NOV/03/98	MODELS: TX3P	SHEET1 OF 1
	NAME: TX3V1.SCH	PCB#&VER: M461/M458	TITLE: PROCESSOR

SCH ISSUE: 1.20

ASSEMBLY M461-1.30
PCB MECH M461-1.30

SHEAR

ETCH GUIDE

M461
TX3P
VER-1.30

#6996TX3P
VER 1.2 OR LATER

1 FUNCTION

SOLDERSIDE M461-1.30

ETCH GUIDE

SHEAR

GRAY
RED
YELLOW
ORN
WHITE
AC-WHT
BROWN
BLK
FR-SWT
FOR 115V
FOR 230V
6A-SB FUNCTION T250MA
#3414
F1
CAUTION!!! HIGH VOLTAGE PRIMARY VOLTAGE

NINE SOCKET EYELETS

JB1 1-,2+,1+,2-
SUB_CHAN1/CHAN2
SPEAKON
PART#

JB4 1-,2+,1+,2-
LO_CHAN1/CHAN2
SPEAKON
PART#

JB3 1-,2+,1+,2-
HI_CHAN1/CHAN2
SPEAKON
PART#

SUB-CHAN2 LO-CHAN2 HI-CHAN2 INPUT-CHAN2 SUB-CHAN1 LO-CHAN1 HI-CHAN1 INPUT-CHAN1

VCD

BLANK SIZE=17.750"X14.500"

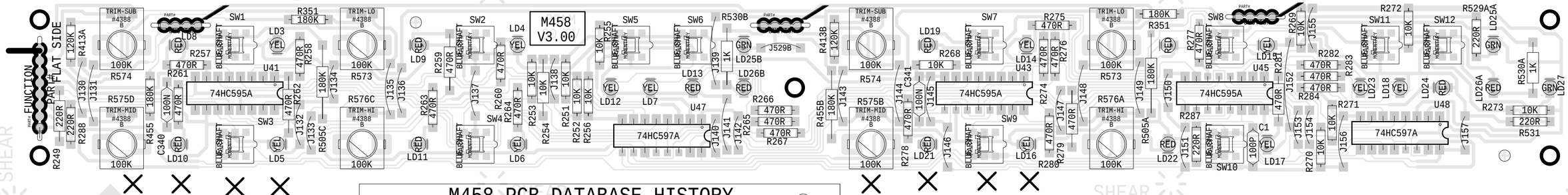
PRODUCTION NOTES

1

M461.PCB_DATABASE_HISTORY

MODEL(S):- TX-3P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	96/11/28	1.0P0	FIRST PROTOTYPE
2	.	.	DERIVED FROM M459 TX4
3	.	.	ADDED TX8/9 SELECT SWITCHES
4	.	.	ALL TL062 CHG TO TLE2062
5	DEC/11/96	1.10	SOME TRACES MOVED FOR TEST-JIG
6	FEB/13/97	1.20	PC#5308 U40-MCM28T4-AT24C02
7	SEP/26/00	1.30	PC#6206_REMOVE_EYELET_FOR_SPKON
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N



M458.PCB_DATABASE_HISTORY

MODEL(S):- TX-PROCESSORS

#	DATE	VER#	DESCRIPTION OF CHANGE
1	OCT/16//96	2.00	PC#5213_ADD_100P_FROM_PIN_14_OF_U45
2	.	.	TO_GROUND
3	OCT/21/96	.	PC#____R529B_MOVED_TO_M454_
4	.	.	REPLACED_BY_JUMPER
5	DEC/04/96	2.10	PC#5263_R413A/B_180K->120K
6	FEB/15/99	3.00	PC#5932_ALL_LED_TO_AUTO_INSERTED_
7	.	.	LED_WITH_SPACER
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N

FOR TX3 & TX4 OMIT 8 PARTS
MARKED WITH X
R575D,R575B,LD10,SW3,LD5
LD21,SW9,LD16
ALL SWITCHES ARE BLUE PT#3439

TX PROCESSOR
TONE GENERATOR

TX9S NOTE:

FOR TX4P VER.3
REPLACE
R307A/B 31K6->39K
R306A/B 33K->31K
R319A/B 68K->130K

M459/M458.SCH_DATABASE_HISTORY

MODEL(S):- TX-4P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	JUL'96	1.00	1ST PRODUCTION
2	AUG/13/96	1.10	PC#5179 C259_270P-->330P, C278A_ 330P->390P, R417A_ 820K->470K, R420A_ 270K->240K, R000A/000A_ 1M->1000K
3	OCT/11/96	1.20	PC#5202 ADD R604A/R605A AT_U2A_ R620A/B572A_ 47K->2.67K, R621A/B572A_ 2.67K->10K, R623A_ 10K->6K49, R624A_ 6K49->2K67, R625A_ 2K67->10K, R626A_ 10K->3K3->2K15 R470A_ 12K->1K
4	OCT/16/96	1.30	PC#5212 ADD_100P_FROM_PIN-14_OF_U45 TO_GROUND
5	FEB/13/97	1.40	PC#5303 ADD_U5A_->NON-INVERTING_ PC#5308 U10 MCM2814->AT24C02
6	APR/04/97	1.50	PC#5352 ADD_R700A_&_Q700A_D700A R701A_8350A->56K_3417A_8323A_47K->56K 3177A_6800A_11.7K_3394A_330R->226R_R257 _ _ _7.4K->56KB_R346A_47K->15K PC#5365_ADD_SW1A_TX9S_SWITCH_ADD
7	APR/10/97	-	R607A->2861DA_
8	JUL/02/97	2.00	PC#5262 2400->3080K_R393A_10K->7K5
9	FEB/02/98	2.10	CORRECTIONS_U19A,U19B_PWR_SUPPLY
10	MAR/10/98	2.20	PC#5533 C301A_100N->100U_C304A_100N ->22U_C303A_100N->470N_R381A_330K->390K
11	NOV/03/98	2.30	CORRECT_Q12A_SYMBOL

TX4P PROCESSOR

INPUT HPF HI LIMIT AGC OUTPUT
NOTCH VCA HP2
ACT CLIP

LO LIMIT 2-3WAY OUTPUT
3WAY BOOST HPF LPF LP2 AGC VCA HP2

SUB LIMIT HPF LPF EQ AGC VCA LP2 OUTPUT HP2

TX4 PROCESSOR
MICRO PROCESSOR & SUPPLIES

M458 SWITCHES LIMIT SENSE LEDS
CAL SENSE, FREQ. SEL MUTES

DS1868 DIGITAL POTS
ANLG MUX
MPU
E²

POWER SUPPLY

EXPORT AC WIRING
NORTH AMERICAN AC WIRING

YORKVILLE	DATE:NOV/03/98	MODELS: TX4P	SHEET1 OF 1 / SCH ISSUE: 2.30
	NAME:M459TX4.SCH	PCB#&VER: M459/M458	TITLE: PROCESSOR

ASSEMBLY M459-5.10
PCB MECH M459-5.10

TX4
PROCESSOR
M459
V5.10

PRODUCTION NOTES

1 ALL TLE2062 IC'S MUST BE TEXAS INSTRUMENT

M459.PCB_DATABASE_HISTORY			
MODEL(S):- TX-4P			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/96	1.00	FIRST PRODUCTION
2	.	.	DERIVED FROM M454
3	OCT/10/96	1.01	PC#XXXX_R527A/B 47K->100K
4	.	.	R570A/B_R572A/B_T17K4->7K96
5	.	.	R503A/B_60K4->1K0 R499A/B 82K5
6	.	.	->36K0 R525A/B 22K->4K7 R532A/B_
7	.	.	45K3->10K R495A/B 45K3->21K6
8	OCT/15/96	2.00	TWO 475R ADDED AT U2A/B
9	.	.	PC#5214 COMPONENTS REMOVED
10	.	.	R300A/B,R417A/B,C184/C183A/B
11	.	.	PC#XXXX_ADD_BAT85 AT U1B
12	NOV/04/96	2.00	PC#XXXX_XPMR_TO_TOROID
13	NOV/14/96	.	PC#5241_U5A/U18A/U21A_4741->TL074
14	.	.	PC#5245_6K2--->6K19
15	NOV/27/96	2.10	PC#5256_U14,15,16,17,23,24,25
16	.	.	U26,27,28-A/B TL062->TLE2062TI
17	FEB\13\96	3.00	PC#5304_U6->NON-INVERTING
18	.	.	PC#5308_U40_MCM2814->AT24C02
19	MAR/03/97	.	PC#5230_ADD_TX9S_SWITCHES
20	APR/04/97	.	PC#5352_ADD_RELAY

M459.PCB_DATABASE_HISTORY			
MODEL(S):- TX-4P			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	APR/04/97	3.00	R313A/B_47K->56K_R350A/B
2	.	.	56K->12K_C177A/B_680N->1u
3	.	.	C179A/B_330N->22UN_R345A/B
4	.	.	4K12->2K_R297A/B_1K->6K8
5	.	.	R346A/B_Z7K->15K
6	APR/10/97	.	R382A/B_240K->680K_R393A/B_10K_7K5
7	MAR/10/98	3.10	PC#5632_R381A/B_33UK->680K
8	APR/98	3.20	PC#5633_C301A/B_100N->100u
9	.	.	C304A/B_100N->22u_C303A/B_100N
10	.	.	->470N
11	APR/98	4.00	TRACES CHANGED PC#5633_TO
12	.	.	ELIMINATE_HAND_STUFFING
13	NOV/19/98	5.00	FIX_SHORT_AT_Q15A/C304A
14	.	.	PC#5886_MOVE_C280A
15	SEP/26/00	5.10	PC#6206_REMOVE_EYELET_FROM_SPKON
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N

NINE SOCKET EYELETS

BLANK SIZE=17.750"X14.500"

BLANK SIZE=17.750"X14.500"

TX5P PROCESSOR

HI

INPUT

HPF

EQ

LIMIT

AGC

VCA

HP2

OUTPUT

LO

LPF

EQ

LIMIT

HPF

AGC

VCA

HP2

LP2

OUTPUT

TX5 PROCESSOR
TONE GENERATOR

M457

LIMIT SENSE

SWITCHES

CAL. SENSE, FREQ. SEL

MUTES

LEDS

DS1868 DIGITAL POTS

ANLG MUX

MPU

POWER SUPPLY

TX PROCESSOR
MICRO PROCESSOR & SUPPLIES

M462.SCH DATABASE HISTORY

MODEL(S):- TX5-PROCESSOR

#	DATE	VER#	DESCRIPTION OF CHANGE
1	OCT/04/99		MADE FROM TX2P M453
2	SEP/13/00		C302A_NON-POLARIZED->POLARIZED
3	D		N
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D		N
11		V	
12		V	

M462.SCH DATABASE HISTORY

MODEL(S):- TX5-PROCESSOR

#	DATE	VER#	DESCRIPTION OF CHANGE
1	D		N
2	D	V	N
3	D	V	N
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D		N
11		V	
12		V	

YORKVILLE	DATE: SEP/13/2000	MODELS: TX5P	SHEET 2OF 1	SCH ISSUE: 1.10
	NAME: M462	PCB#&VER: M462		TITLE: PROCESSOR

ASSEMBLY M462-1.10
PCB MECH M462-1.10

BLANK SIZE=17.500"X14.500"

TX5P
PROCESSOR
M462
V1.10

#6996TX5P
USE V1.0 PROCESSOR

PRODUCTION NOTES

1 FOR 120V OPERATION STUFF
J200 AND J202
REMOVE J201

FOR 220VAC OPERATION
REMOVE J200 AND J202
STUFF J201

2 FOR R315A/B/C/D USE PT#5016
820R 1/8WFP
FOR ALL 20K USE 20K0 MINI

M462.PCB_DATABASE_HISTORY

MODEL(S):- TX-5P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	OCT,99	V1.00	MADE FROM TX-2P M453
2	SEP/07/00	.	PC#6I68_UPDATE_XLR_#3657
3	SEP/13/00	1.10	PC#6181_C302A,B,C,D NON
4	.	.	POLARIZED->POLARIZED
5	EP/26/00	.	PC#6206_REMOVE_SPKON_EYELET
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N

JB1 1-,2+,1+,2- LO_CHAN3/CHAN4 SPEAKON #6956
JB4 1-,2+,1+,2- HI_CHAN3/CHAN4 SPEAKON #6956
JB2 1-,2+,1+,2- LO_CHAN1/CHAN2 SPEAKON #6956
JB3 1-,2+,1+,2- HI_CHAN1/CHAN2 SPEAKON #6956

B9 CHANNEL4_LO #3923
B8 CHANNEL4_HI #3923
B1 CHANNEL4_INPUT #3657
B7 CHANNEL3_LO #3923
B7 CHANNEL3_HI #3923
B2 CHANNEL3_INPUT #3657
B6 CHANNEL2_LO #3923
B6 CHANNEL2_HI #3923
B3 CHANNEL2_INPUT #3657
B5 CHANNEL1_LO #3923
B5 CHANNEL1_HI #3923
B4 CHANNEL1_INPUT #3657

CAUTION!!! HIGH VOLTAGE

U:\TX8P236.PRT

TX8P PROCESSOR

HI

INPUT
HPF
NOTCH
LIMIT
AGC
OUTPUT
ACT
CLIP
VCA
HP2

MID

LPF
HPF
EQ
LIMIT
OUTPUT
VCA
AGC
HP2
LP2

LO

LPF
3WAY BOOST
HPF
3-4WAY
LIMIT
OUTPUT
VCA
AGC
HP2
LP2

SUB

HPF
EQ
LIMIT
VCA
AGC
HP2
LP2
OUTPUT

TX PROCESSOR
TONE GENERATOR

M454/M458.SCH DATABASE HISTORY			
MODEL(S):-	TX-8P		
#	DATE	VER#	DESCRIPTION OF CHANGE
1	JUL/96	1.00	1ST PRODUCTION
2	JUL/15/96	1.10	R472A 270K->390K C293A 330P-->270P C228A/C224A,C221A/C220A 390P-->220P SCHEMATIC ERRORS CORRECTED
3	-		
4	AUG/12/96	1.20	PCB5178 R382A 270K--220K C278 6N8-->6N8
5	-		
6	-		PCB5181 CORRECT U19A/B PIN-OUTS
7	AUG/27/96	1.30	PCBXXXX TO_MANY_VALUE_CHANGES_TO 2K2
8	AUG/30/96	1.40	PCB5195 C278A 5N1-->4N7 R382A 270K -->220K
9	SEP/20/96	1.50	PCB5194 NEW CIRCUIT AT U2A/B R503A 133K-221K 5 R470K 20K0-->7K96 R499A 75K0-->31K6 R495A 82K3-->31K6
10	SEP/23/96	2.00	PCB5195 400HZ BOOST CIRCUIT ADDED
11	OCT/08/96	2.10	CORRECTED TO MATCH_LAYOUT R476A 12K<->1K
12	OCT/16/96	2.20	PCB5223 ADD_100P_FROM_PIN_14_OF_U45 TO GROUND
13	OCT/21/96	2.30	PCBXXXX ADDED SW1A R606A R405A R405A 33K->20K
14	NOV/06/96	2.40	PCB5284 R606A 60K4-->30K R405A_20K-> >33K R395A 75K->130K
15	NOV/12/96	2.50	XFMR TO TOROID
16	NOV/14/96	-	PCB5241'USA,U8A,U18A,U21A_4741-- -->TL074
17	-		PCB5240 R503A 6K98-->4K99_R414A-- PCB5240'R503A'6K98->4K99_R414A- 33K->20K
18	NOV/27/96	2.60	PCB5256 U15A,14A,28A,17A,16A,24A, U27A,25A,26A,23A TL062->TL082/2562 U9A,10A,11A,12A, TL062->TL072
19	DEC/04/96	2.70	PCB5260 XFMR WIRES CHG_COLOUR
20	-		PCB5262'CORRECTIONS
21	-		PCB5263'R413A 180R->120E
22	FEB/13/97	2.80	PCB5308'U40 MCM2814->AT24C02
23	JUN/09/97	2.90	PCB5412'C293A 150P->270P_R472A 390K->220K
24	AUG/20/97	3.00	PCB5453 R606A 30K->33K_R405A_33K->27K_R519A_130K->82K_R382A_220K->150K_C278A_4n7->6n8E'
25	-		PCB5484_R302A_REMOVED
26	OCT/07/97	3.10	PCB5226'CORRECTED_TO_MATCH_PCB
27	OCT/24/97	3.20	PCB5501'R527A_100R->47K_R528A_33K->6K98
28	NOV/03/97	3.30	PCB - R426A_150K->330K
29	AUG/10/98	3.40	CORRECT_Q12A_BYMAGL
30	NOV/03/98	3.50	PCB - SEE_NOTE_FOR_CHANGES
31	JAN/06/99	3.60	CORRECTIONS_TO_MATCH_LAYOUT_C322A 22U->4U7_C323A_2U2->1U_C312A_47n->4U7 C320A 4U7->1U
32	APR/03/00		

NOTES

JAN/06/99 PC#

C292A, C291A 100N TO 68N
U8A /2_INVERTED DELETE R525A R532A 330K TO 390K
C286A DELETED R426A 330K TO 390K
C287A, C288A 100N TO 68N
C302A 100N TO 4u7/63V C700A 10u/63V TO 1u
U9A/I INVERTED ADD 4K7 (R525A)BETWEEN PIN 2 OF 1C AND PIN 4 PLA R524A 1K TO 4K7
R356A 1K TO R355A 2K2 TO 1K
ADD 330N (C332A) FROM PIN 1 U28A TO JUNCTION OF R356A, R355A
R301A 1K TO 2K R355A 2K2 TO 1K
ADD CIRCUIT TO DS1867 'SIM (C313A) 27N (C314A) 47K(R608A) 20K(R609A) 75K (R610A

DELETE CIRCUIT FOR U14A/2
R345A,R297A,C179A,C179A,R346A,R352A
R349A,R361A
R313A 47K TO 30K C271A 100N TO 33N
C272A 100N TO 150N R316A 36K TO 30K
R360A 6K98 TO 10K R358A 1K TO 2K
R359A 2K32 TO 3K C276A 100N TO 330N
C276A 100N TO 330N C275A 100N TO 150N
C274A 680N TO 470N

SUB

TX8P PROCESSOR

115/230VAC
60/50HZ
PART#1320
25VA

POWER SUPPLY

M458

SWITCHES

LIMIT SENSE

CAL. SENSE, FREQ. SEL

MUTES

LEDS

DS1868 DIGITAL POTS

ANLG MUX

MPU

TX-8 PROCESSOR
MICRO PROCESSOR & SUPPLIES

VORVILLE	DATE: APR/03/2000	MODELS: TX8P/TX8P	SHEET 1 OF 1
	NAME: M454TX8	PCB#&VER: M454/M458	TITLE: PROCESSOR

SCH ISSUE: 3.60

ASSEMBLY M454-6.10
PCB MECH M454-6.10

TX-8
PROCESSOR
M454
V6.10

#6996TX8P
VER. V1.5 OR LATER

ETCH GUIDE

SHEAR

PRODUCTION NOTES

1 NOTE FOR AUTO-INSERTION
ALL 1K ARE STUFFED AS 1K0
ALL 10K ARE STUFFED AS 10K0
TO ELIMINATE AN EXTRA PASS
ON THE VCD

2 NOTE ALL TLE2062 MUST BE
TEXAS INSTRUMENT ONLY

3 NOTE U49 PT6996 MUST BE
VERSION V1.5 OR LATER

FOR 120V
FOR 230V
FOR 230V
FOR 120V
BROWN
GRAY
RED
YELLOW
WHITE
ORN
AC-WHT
BLK
PRIMARY VOLTAGE
.6A-SB FUNCTION T250MA #3414
F1
CAUTION!!! HIGH VOLTAGE
PR-SWT

M454.PCB_DATABASE_HISTORY

MODEL(S):- TX-8P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	JUL/96	1.02	FIRST PRODUCTION
2	JUL/15/96	2.00	CORRECT TRACES AT U54A/B
3	.	.	C220-C221-C224-C228_A/B_FROM
4	.	.	390P-->220P
5	.	.	R414B 27K-->33K R381A/B 1M-->
6	.	.	JUMPER C293A/B 330P-->270P
7	.	.	R472A/B 270K-->390K
8	AUG/12/96	2.10	PC#5178 C278A,B 6N8-->8N2
9	.	.	R382A,B 270K-->Z20K
10	AUG/26/96	2.20	PC#XXXX SEE LIST BELOW
11	AUG/29/96	2.20	PC#5195-C278A/B_5N1-->4N7
12	.	.	R382A/B 270K-->Z20K
13	SEP/20/96	3.00	PC#5194 R503A/B 133K-->21K5
14	.	.	R470A/B 20K0-->7K96 R499A/B
15	.	.	75K0-->31K6 R495A/B 82K5-->31K6
16	.	.	ALTERED CIRCUIT AT U2A/B
17	.	.	PC#5196 CORRECTED PART SPANS
18	OCT/21/96	4.00	PC#5230 ADDED TX87TX9 SWITCH
19	.	.	PC#5226 TO MANY CHANGES TO LIST
20	.	.	PC#5231 ADD DIODE AT U1B

M454.PCB_DATABASE_HISTORY

MODEL(S):- TX-8P

#	DATE	VER#	DESCRIPTION OF CHANGE
1	OCT/23/96	4.00	PC#5227 C277A/B 2N2-->3N3
2	OCT/25/96	.	PC#5240 R503A/B 6K98->4K99
3	.	.	R414A/B 33K->30K
4	OCT/31/96	5.00	PC#XXXX POWER_XFMR TO TOROID
5	NOV/05/96	.	PC#5244 R606A/B 60K4->30K R405A
6	.	.	/B 20K->33K R319A/B 75K->T30K
7	NOV/14/96	5.00	PC#5241 U5A/U8A/U18A/U21A_
8	.	.	4741-->TL074
9	NOV/27/96	5.10	PC#5256 U14,15,16,17,23,24,25
10	.	.	U26,27,28-A/B TL062->TLE2062TI
11	.	.	U9,10,11,12-A/B TL062->TL072
12	DEC/04/96	.	PC#5260 XFMR WIRES CHANGED
13	FEB/13/97	5.20	PC#5308 U40 MCM2814->AT24C02
14	JUN/09/97	5.21	PC#5412 R47ZA/B 390K->220K
15	.	.	C93A/B 150P->270P
16	AUG/20/97	5.22	PC#5453 SEE NOTE
17	OCT/07/97	5.23	PC#5484 R302A/B DELETED
18	OCT/24/97	5.24	PC#5501 R527A/B 100K->47K
19	.	.	R528A/B 33K 6K98
20	AUG/10/98	5.25	PC#____R426A/B 150K->330K
21	JAN/06/99	6.00	PC#____SEE NOTE BELOW
22	SEP/25/00	6.10	PC#6206 REMOVE EYELET FOR SPKON

M454 part changes AUG 6, 96

from	to
R433 A/B 15K	-->5K36
C277 A/B 3n3	-->2n2
R358 A/B 1K3	-->1K
C278 A/B 8n2	-->4n7
R406 A/B 22K	-->9K1
R307 A/B 31K6	-->45K3
R409 A/B 22K	-->2K32
R506 A/B 11K	-->10K
R526 A/B 47K	-->24K
R533 A/B 2K7	-->1K6
R332 A/B 8K2	-->11K
R449 A/B 3K3	-->470R
R450 A/B 1K5	-->1K3
R330 A/B 6K8	-->15K
R327 A/B 5K6	-->16K
R447 A/B 2K2	-->681R0
R356 A/B 0R	-->1K
R499 A/B 82K5	-->75K0

axial parts

from	to
R360 A/B 9K1	-->6K98
R381 A/B 0R	-->150K
R359 A/B 1K8	-->2K32
R495 A/B 31K6	-->82K5
R407 A/B 22K	-->2K49
R410 A/B 22K	-->7K96
R333 A/B 10K	-->1K3
R303 A/B 10K0	-->4K99
R535 A/B 10K0	-->4K99
R503 A/B 60K4	-->133K
C293 A/B 270p	-->150p
R492 A/B 8K2	-->750R
R456 A/B 3K	-->4K120
R470 A/B 45K3	-->20K0
R445 A/B 2K7	-->4K120
R446 A/B 3K3	-->1K4
R355 A/B 4K7	-->2K2
R306 A/B 37K9	-->60K4

radial parts

C270 A/B	47n-->100n	R324 A/B	56K-->30K
C285 A/B	47n-->100n	R316 A/B	56K-->36K
C265 A/B	39n-->150n	R350 A/B	56K-->10K
C281 A/B	68n-->680n	C274 A/B	???-->680n
C280 A/B	100n-->150n	C189 A/B	3n3-->2n2
C279 A/B	100n-->150n	C195 A/B	6n8-->2n2
C284 A/B	100n-->150n	C267 A/B	39n-->150n
C269 A/B	100n-->39n	C290 A/B	47n-->180n
C193 A/B	100n-->330n	C268 A/B	47n--> 39n
C282 A/B	688n-->680n	C289 A/B	47n-->180n
C273 A/B	NEW-->680n		

parts removed
R417 A/B 3K9 R300 A/B 2K49 R320 A/B 20K0
C183 A/B 470n C184 A/B 680n

M454 part changes OCT 21,96

R405 A/B	33K-->20K0	R319 A/B	68K-->75K
R570 A/B	17K4-->7K96	R322 A/B	68K-->75K
R572 A/B	17K4-->7K96	R527 A/B	47K-->100K
R503 A/B	21K5-->6K98	R525 A/B	22K-->4K7
R532 A/B	45K3-->3K3	R515 A/B	10K0-->4K99
R509 A/B	20K0-->10K0	R516 A/B	10K0-->4K99
R511 A/B	20K0-->10K0	R470 A/B	7K96-->4K99
R453 A/B	4K99-->10K0	R457 A/B	4K99-->10K0
R499 A/B	31K6-->10K0	R524 A/B	22K-->1K
R495 A/B	31K6-->5K36		

Radial parts
C283 A/B 100n-->150n
Parts removed
R523 A/B 22K-->DNS

M454 PC#5453 AUG 20,97

R606 A/B 30K-->33K
R405 A/B 33K-->27K
R319 A/B 130K-->82K
R382 A/B 220K-->150K
C278 A/B 4n7--> 6n8

JAN/06/99 M454 PC#____

C292A/B, C291A/B 100N TO 68N
U9A/B INVERTED DELETE R525A/B
R525A/B R532A/B 330K TO 390K
C286A DELETED R426A 330K TO 390K
C287A/B, C288A/B 100N TO 68N
C302A 100N TO 4u7/63V C700A 10u/63V TO 1u
U9A/B INVERTED ADD 4K7 (R525A/B)BETWEEN
PIN 2 OF IC AND PIN 4 OF P1A/B
R524A/B 1K TO 4K7
R356A 1K TO 2K R355A 2K2 TO 3K
ADD 330N (C332A) FROM PIN 1 U28A TO
JUNCTION OF R356A/B R355A/B
R301A/B 1K TO 2K R355A 2K2 TO 3K
ADD CIRCUIT TO U28A/B 22N(C333A/B)75K R610A/B
(C334A) 47K(R608A) 20K(R609A) 75K (R610A
DELETE CIRCUIT FOR U14A/2
R313A/B 47K TO 30K C271A/B 100N TO 33N
C272A 100N TO 150N R316A 36K TO 30K
R360A/B 6K98 TO 10K R358A/B 1K TO 2K
R359A/B 2K32 TO 3K C276A/B 100N TO 330N
C276A/B 100N TO 330N C275A/B 100N TO 150N
C274A/B, 680N TO 470N

TWELVE SOCKET EYELETS

JB1	JB4	JB2	JB3
1-,2+,1+,2-	1-,2+,1+,2-	1-,2+,1+,2-	1-,2+,1+,2-
SUB_CHAN1/CHAN2	LO_CHAN1/CHAN2	MID_CHAN1/CHAN2	HI_CHAN1/CHAN2
SPEAKON	SPEAKON	SPEAKON	SPEAKON
PART#	PART#	PART#	PART#

PART# SUB-CHAN2 · PART# LO-CHAN2 · PART# MID-CHAN2 · PART# HI-CHAN2 · PART# INPUT-CHAN2
PART# SUB-CHAN1 · PART# LO-CHAN1 · PART# MID-CHAN1 · PART# HI-CHAN1 · PART# INPUT-CHAN1

VCD

BLANK SIZE=17.750"X14.500"